3.14 User Services Activities

3.14.1a End-to-End Order Tracking Scenario - Hard Media

3.14.1a.1 Scenario Description

This scenario describes the processes involved in filling an order for data. An order for data on hard media is placed with the Release A Search and Order Tool for data archived at an ECS DAAC. This scenario describes the automated steps which are carried out by the Science Data Server (SDSRV), Data Distribution (DDIST) and Storage Management (STMGT) to fill the orders. The various views into the process available to both the User and the Operator are also described.

3.14.1a.2 Frequency

An estimated 35 orders per day per ECS DAAC for science data users are expected in the Release A timeframe. This number is an average based on the following numbers from the ECS User Modeling Group:

- 500 science users
- limited amount of migrated Release A data
- 26,450 orders per year
- 250 working days per year
- 3 ECS DAACs

3.14.1a.3 Assumptions

1. Data ordered is assumed to be from non-restricted collections.
2. Connectivity to the DAAC is available.
3. The user does not meet any of the criteria required to necessitate manual order verification.

3.14.1a.4 Components

Figure 3.14.1a.4-1 indicates the interaction between the DAAC personnel and the ECS subsystems.

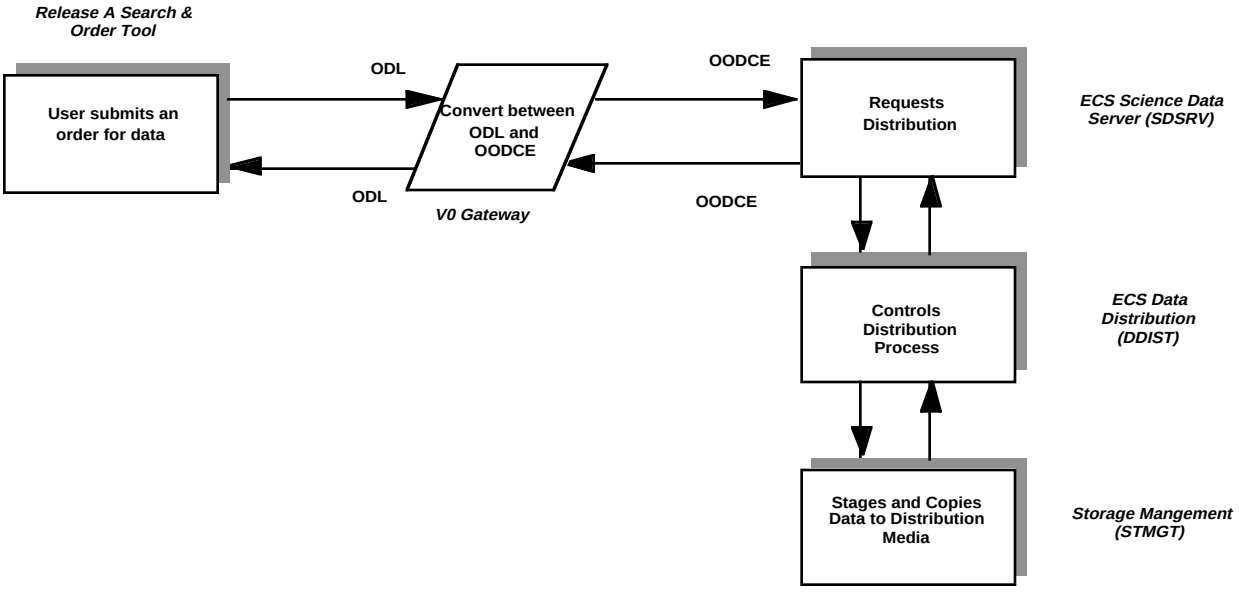

Figure 3.14.1a.4-1. End-to-End Order Tracking Scenario - Hard Media Components

3.14.1a.5 Preconditions

The order for data has been placed using the Release A Search and Order Tool. Please refer to *Scenario 3.1.4.4 Place an Order for a Potential User* for details on placing an order with the S & O Tool.

3.14.1a.6 Detailed Steps of Process

Table 3.14.1a.6-1 represents the details of this scenario. The times and duration given are approximate.

Table 3.14.1a.6-1. End-to-End Order Tracking Scenario-Hard Media Process (1 of 4)

Step	Time (mins)	User	Operator	ECS System	Figure
1	< 3	User submits an order for data on hard media from the GSFC ECS DAAC using the S & O Tool.			3.14.1a.6-1
2	< 1			V0 Gateway receives order from the S & O Tool and translates order from ODL to OODCE.	
3	< 1			V0 Gateway submits order to the SDSRV.	
4	< 1			SDSRV queues order and updates SDSRV Order Status to QUEUED.	
5	< 1			V0 Gateway creates order in MSS database and initializes MSS Order Status to RECEIVED.	
6	< 1		(OPTIONAL) Operator views SDSRV Order Status of QUEUED on the “request MainWindow” screen with the SDSRV filter.		3.14.1a.6-2
7	< 1		(OPTIONAL) Operator views details regarding order on the “RequestInfo” screen.		3.14.1a.6-3
8	dependent on network traffic			V0 Gateway sends transaction progress S & O Tool.	
9	< 1	User views transaction progress on the Comm Status screen.			3.14.1a.6-4

10	< 1			SDSRV retrieves order from queue, executes order and updates SDSRV Order Status to IN_PROCESS.	

Step	Time (mins)	User	Operator	ECS System	Figure
11	< 1			SDSRV sends the order to Data Distribution (DDIST).	
12	< 1			DDIST checks order against size (# of bytes) and file (# of files) thresholds, to determine if the order contains so much data (bytes) or so many files that it needs to be split into multiple requests for processing. Thresholds are not exceeded. Order will be processed as a single entity.	
13	< 1			DDIST Order Status updated to STAGING in the MSS database.	
14	< 1			DDIST Order Status Details updated with: Media Type User ID Destination Number of Data Items Distribution Size (# of bytes)	
15	< 1		Operator views DDIST Order Status of STAGING on the “Distribution Summary” screen.		3.14.1a.6-5
16	< 1		Operator views DDIST Order Status Details on the “Distribution Request” screen.		3.14.1a.6-6

Step	Time (mins)	User	Operator	ECS System	Figure
17	< 1			Using STMGT utilities, DDIST retrieves data from the archive (via AMASS) and places the data into Working Storage.	
18	< 1	User contacts GSFC DAAC User Services for status of order.			
19	< 3		User Services uses the Data Order Tracking Tool on the Release A Desktop to query status of order for user.		
20	dependent on the request load			Hard media device is not available; DDIST Order Status updated to PENDING.	
21	<1			Hard media device becomes available; DDIST Order Status updated to TRANSFERRING.	
22	<1		Operator generates tape label.		
23	dependent on the amount of data; 'touch time' of 6 mins/tape			The selected data granules are copied to hard media by DDIST interacting with STMGT.	
24	<1			DDIST Order Status updated to WAITING_FOR_SHIPMENT. The DDIST Order Status Details updated with Number of Media.	
25	<1		Operator generates shipping label.		

26	<1			SDSRV updates SDSRV Order Status to COMPLETED.	

Step	Time (mins)	User	Operator	ECS System	Figure
27	<1			DDIST prepares packing list.	
28	<1			Order is shipped.	
29	<1		Operator uses “Distribution Summary” screen to update DDIST Order Status to SHIPPED.		
30	<1			DDIST sends eMail notification to user that order has been shipped.	
31	n days: dependent on postal schedule	Order is received by the user			

3.14.1a.7 Postconditions

The user has received their order for data on hard media from the GSFC ECS

DAAC.3.14.1b End-to-End Order Tracking Scenario - FTP

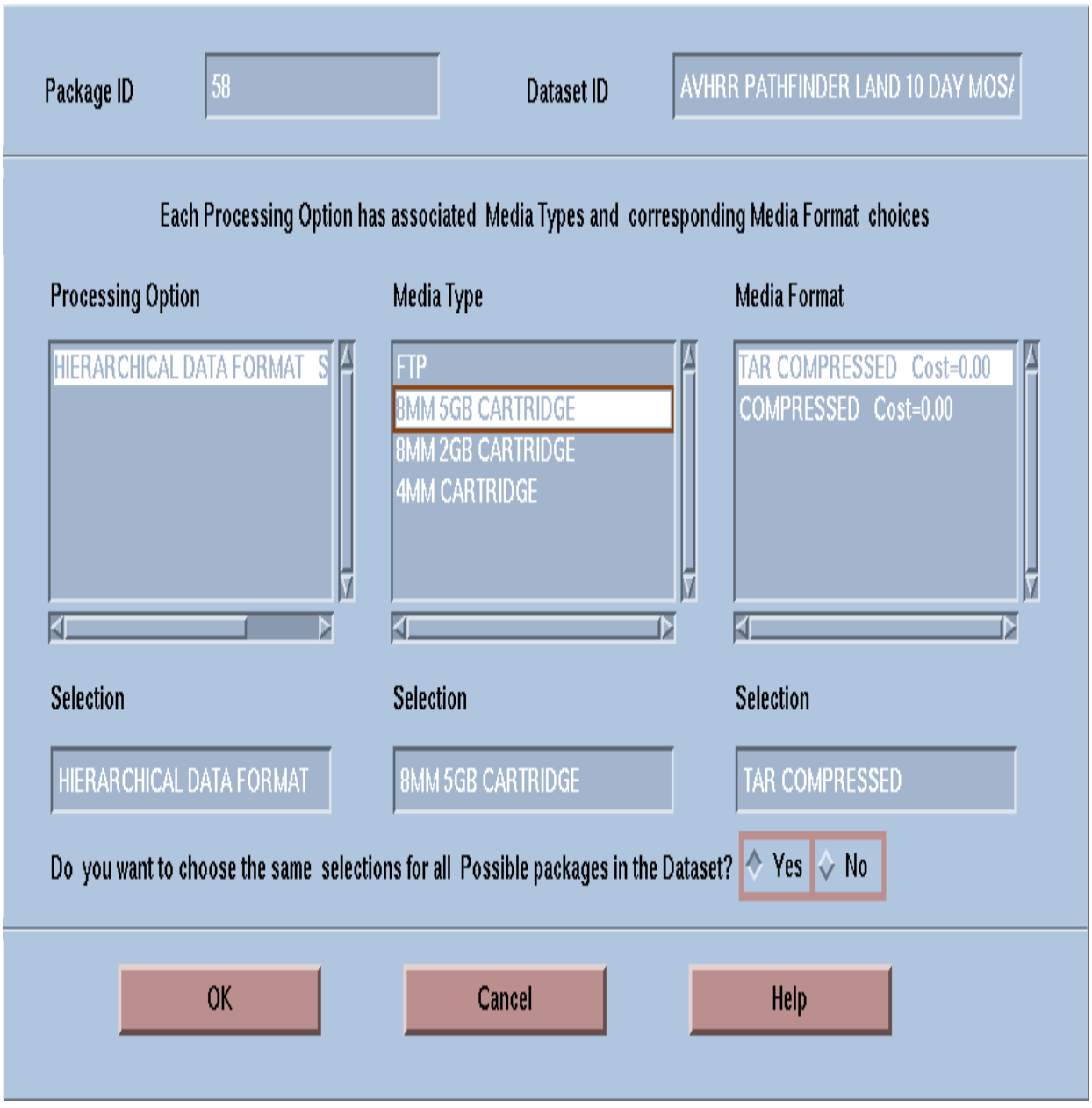

Figure 3.14.1a.6-1. Product Request Screen

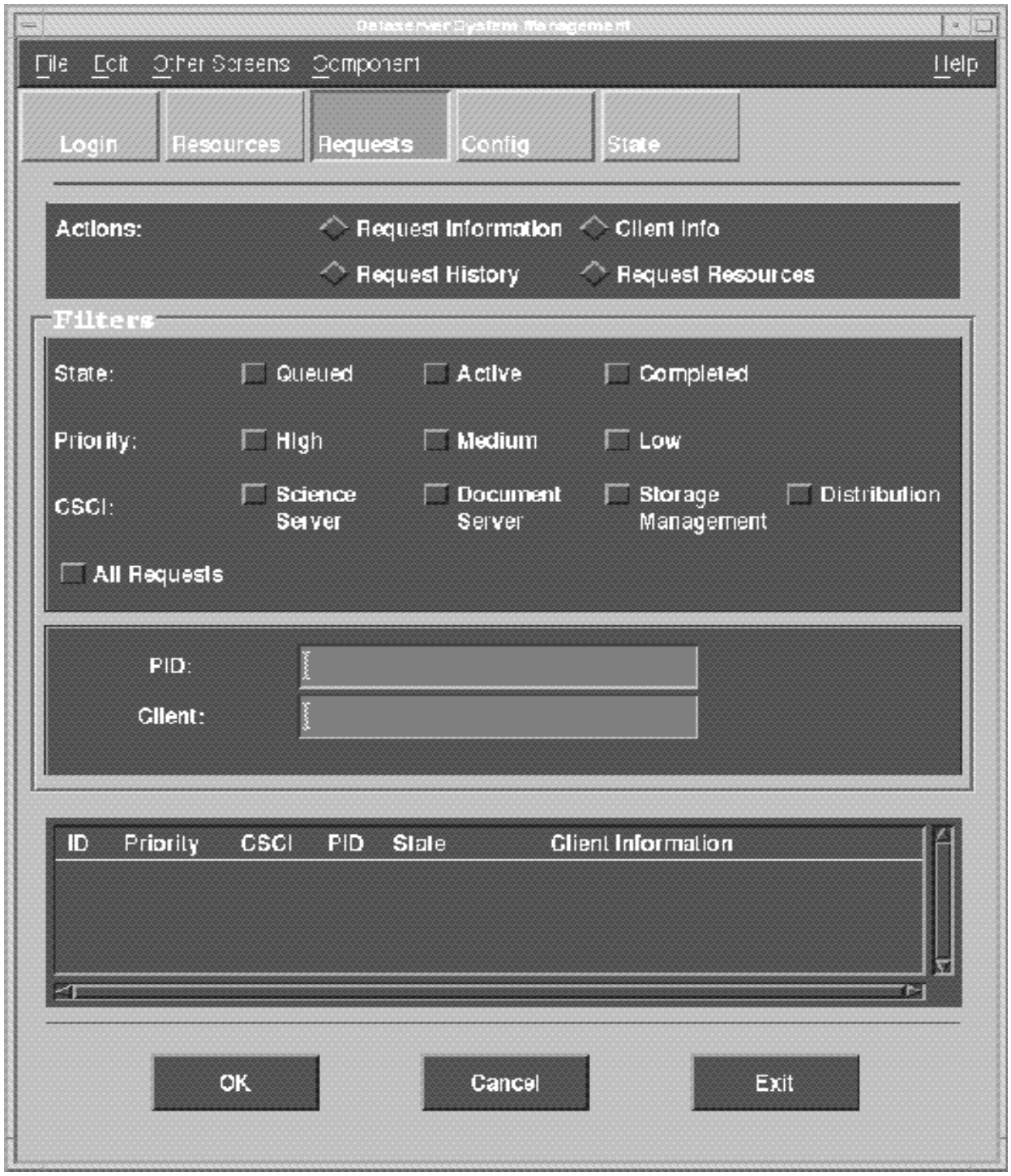

Figure 3.14.1a.6-2. DSS System Management - Requests Screen

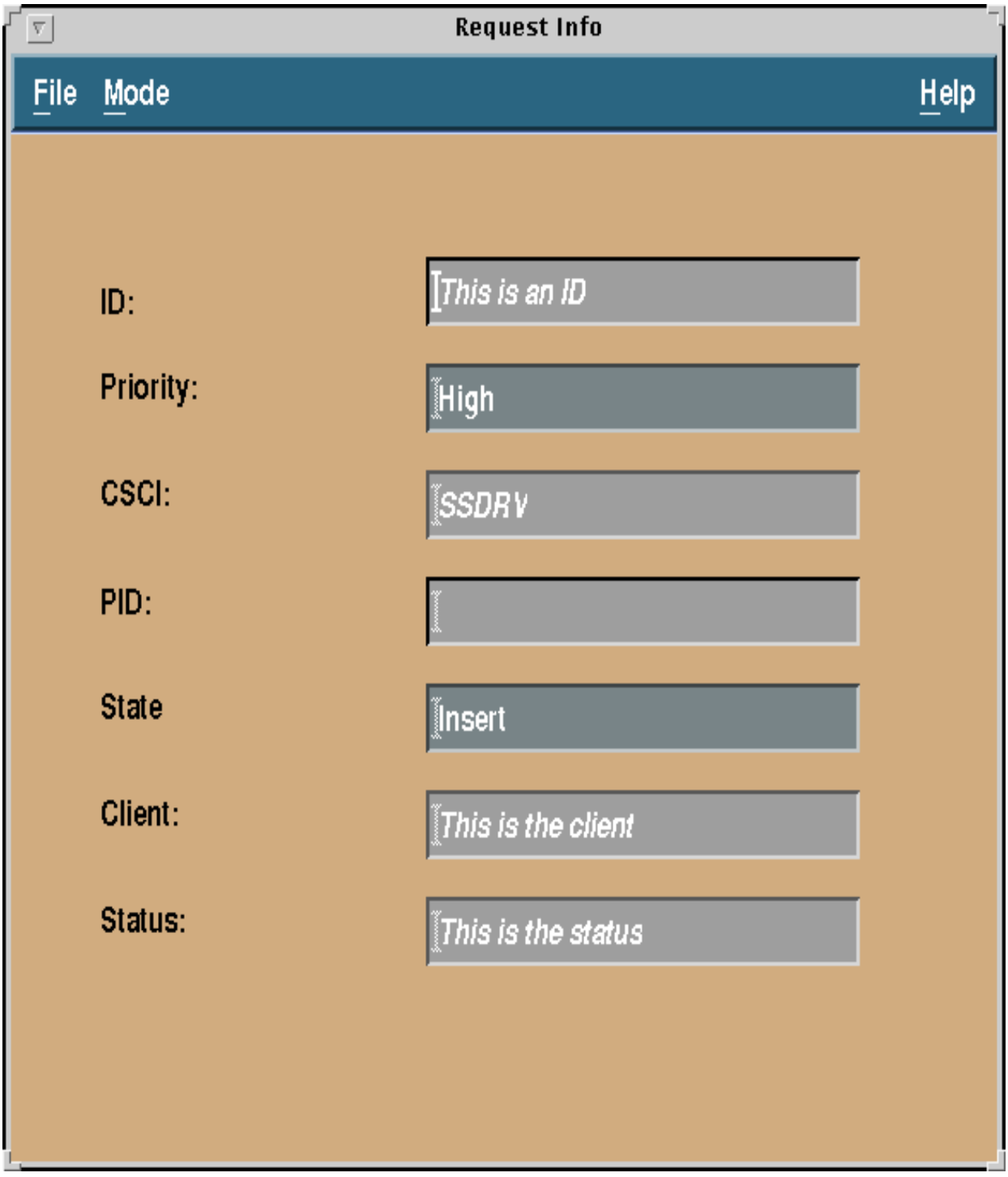

Figure 3.14.1a.6-3. DSS System Management - Request Info Screen

Figure 3.14.1a.6-4. Communication Status Screen

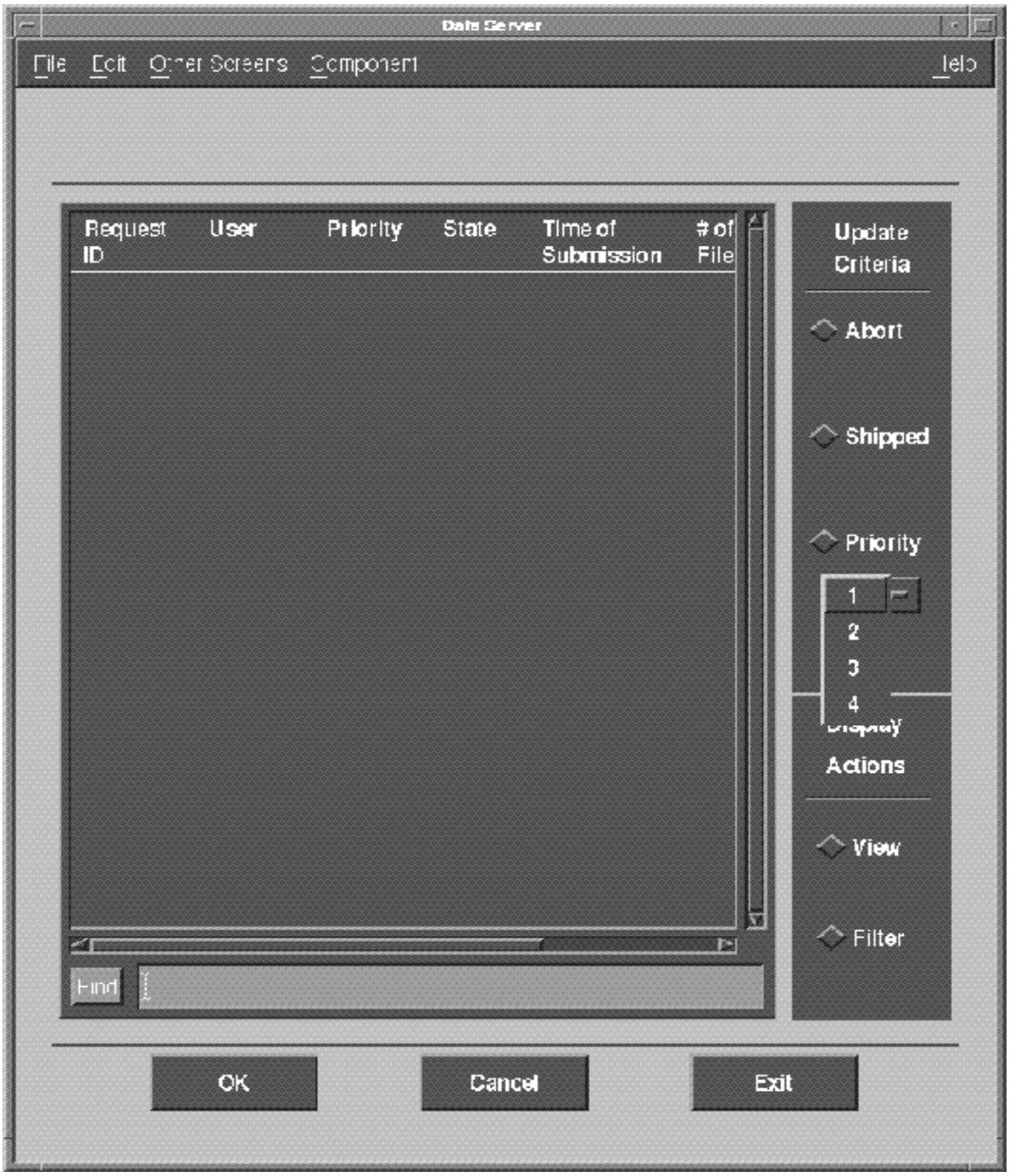

Figure 3.14.1a.6-5. Distribution Management (Home) - Requests Screen

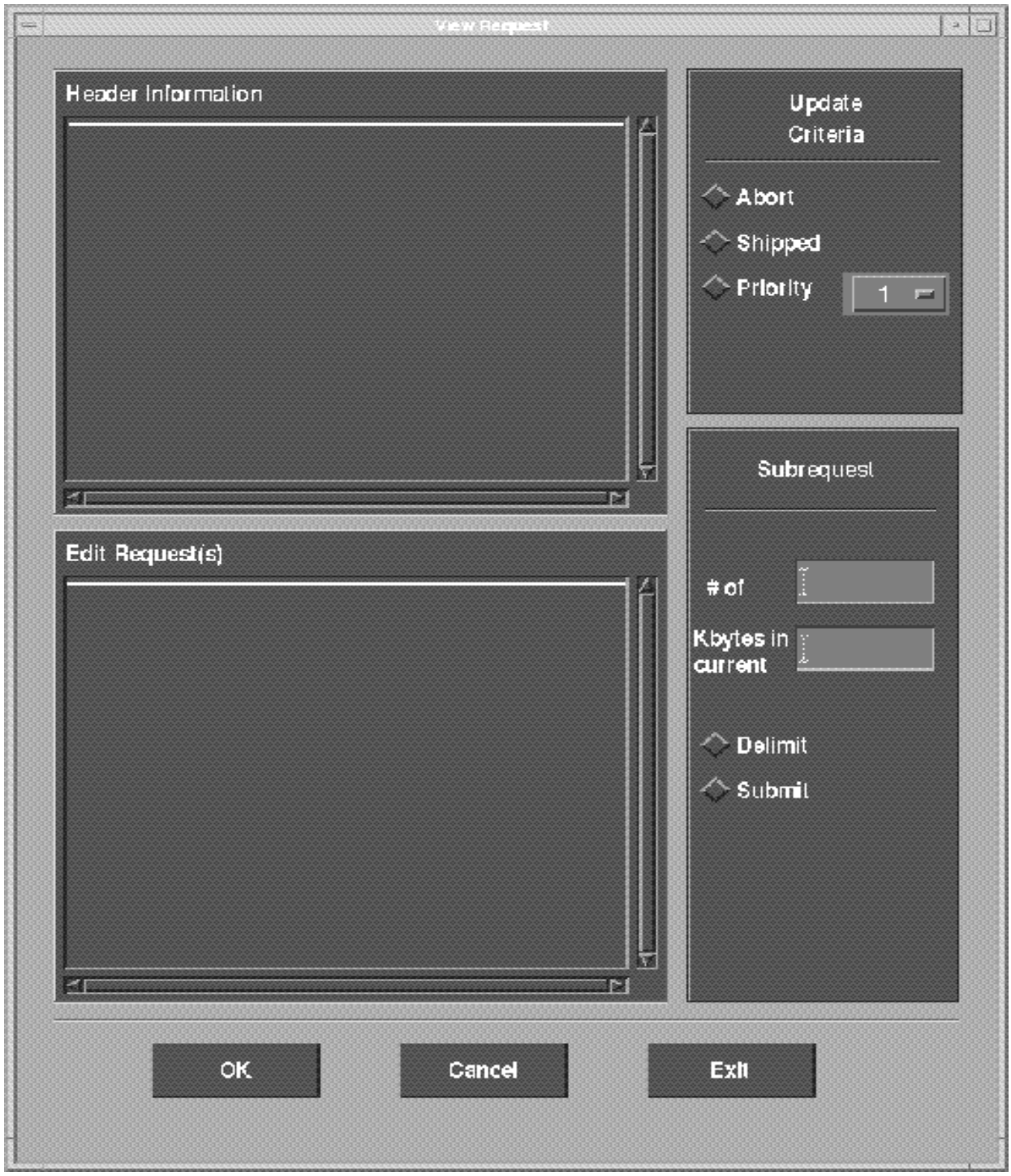

Figure 3.14.1a.6-6. Distribution Management - View Request Screen

3.14.1b End-to-End Order Tracking Scenario - FTP

3.14.1b.1 Scenario Description

This scenario describes the processes involved in filling an order for data. An order for data via FTP is placed with the Release A Search and Order Tool for data archived at an ECS DAAC. This scenario describes the automated steps which are carried out by the Science Data Server (SDSRV), Data Distribution (DDIST) and Storage Management (STMGT) to fill the orders. The various views into the process available to both the User and the Operator are also described.

3.14.1b.2 Frequency

An estimated 35 orders per day per ECS DAAC for science data users are expected in the Release A timeframe. This number is an average based on the following numbers from the ECS User Modeling Group:

- 500 science users
- limited amount of migrated Release A data
- 26,450 orders per year
- 250 working days per year
- 3 ECS DAACs

3.14.1b.3 Assumptions

1. Data ordered is assumed to be from non-restricted collections.
2. Connectivity to the DAAC is available.
3. The user does not meet any of the criteria required to necessitate manual order verification.

3.14.1b.4 Components

Figure 3.14.1b.4-1 indicates the interaction between the DAAC personnel and the ECS subsystems.

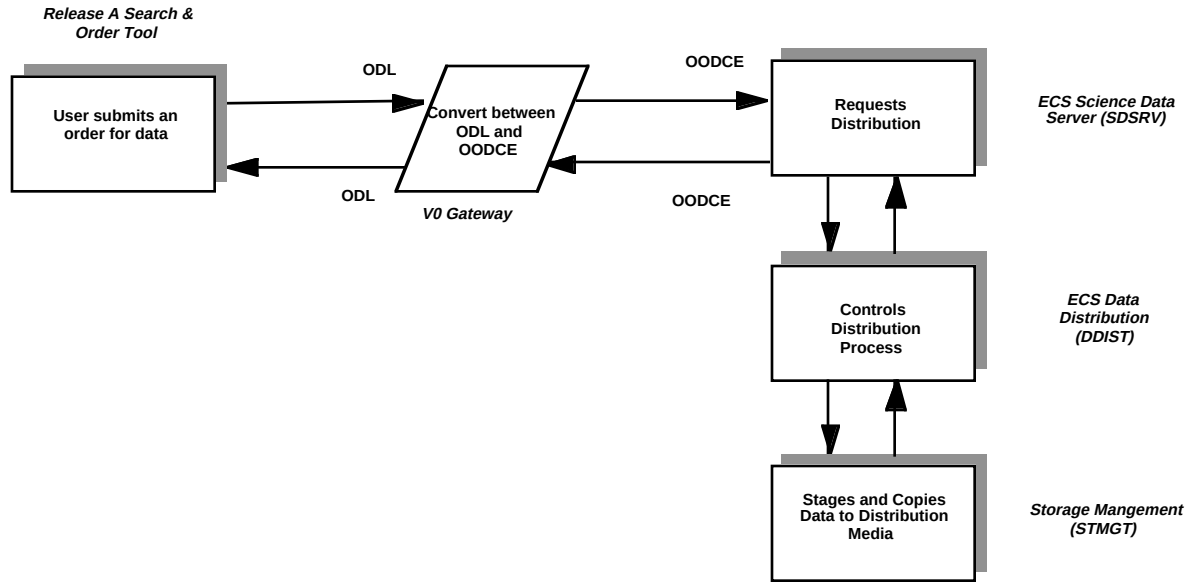

Figure 3.14.1b.4-1. End-to-End Order Tracking Scenario - FTP Components

3.14.1b.5 Preconditions

The order for data has been placed using the Release A Search and Order Tool. Please refer to *Scenario 3.1.4.4 Place an Order for a Potential User* for details on placing an order with the S & O Tool.

3.14.1b.6 Detailed Steps of Process

Table 3.14.1b.6-1 represents the details of this scenario. The times and duration given are approximate.

Table 3.14.1b.6-1. End-to-End Order Tracking Scenario - FTP Process (1 of 3)

Step	Time (mins)	User	Operator	ECS System	Figure
1	< 3	User submits an order for data for FTP from the GSFC ECS DAAC using the S & O Tool.			3.14.1a.6-1
2	< 1			V0 Gateway receives order from the S & O Tool and translates order from ODL to OODCE.	
3	< 1			V0 Gateway submits order to the SDSRV.	
4	< 1			SDSRV queues order and updates SDSRV Order Status to QUEUED.	
5	< 1			V0 Gateway creates order in MSS database and initializes MSS Order Status to RECEIVED.	
6	< 1		Operator views SDSRV Order Status of QUEUED on the “request MainWindow” screen with the SDSRV filter.		3.14.1a.6-2
7	< 1		Operator views details regarding order on the “RequestInfo” screen.		3.14.1a.6-3
8	< 1			V0 Gateway sends transaction progress to S & O Tool.	
9	dependent on network traffic	User views transaction progress on the Comm Status screen.			3.14.1a.6-4
10	< 1			SDSRV retrieves order from queue, executes order and updates SDSRV Order Status to IN_PROCESS.	
11	< 1			SDSRV sends the order to Data Distribution (DDIST).	

Step	Time (mins)	User	Operator	ECS System	Figure
12	< 1			DDIST checks order against size and file thresholds to determine processing method. Thresholds are not exceeded. Order will be processed as a single entity.	
13	< 1			DDIST Order Status updated to STAGING in the MSS database.	
14	< 1			DDIST Order Status Details updated with: Media Type User ID Destination Number of Data Items Distribution Size (# of bytes)	
15	< 1		Operator views DDIST Order Status of STAGING on the “Distribution Summary” screen.		3.14.1a.6-5
16	< 1		Operator views DDIST Order Status Details on the “Distribution Request” screen.		3.14.1a.6-6
17	< 1			Using STMGT utilities, DDIST retrieves data from the archive (via AMASS) and places the data into Working Storage.	
18	< 1	User contacts GSFC DAAC User Services for status of order.			
19	< 3		User Services uses the Data Order Tracking Tool on the Release A Desktop to query status of order for user.		

Step	Time (mins)	User	Operator	ECS System	Figure
20	< 1			DDIST, via STMGT, copies selected data granules to Pull Storage; DDIST Order Status updated to TRANSFERRING.	
21	< 1			STMGT Pull Monitor increments Access Count indicating one more user will be accessing the order via FTP.	
22	< 1			DDIST Order Status updated to WAITING_FOR_SHIPMENT.	
23	< 1			DDIST sends eMail notification to user that order is available in Pull Storage.	
24	< 1			SDSRV updates SDSRV Order Status to COMPLETED.	
25	dependent on amount of data and net-work load	User FTPs files to local workstation.			
26	< 1			Modified FTP Server notifies STMGT that the files have been pulled by user.	
27	< 1			STMGT Pull Monitor decrements Access Count.	
28	< 1			DDIST Order Status updated to SHIPPED.	

3.14.1b.7 Postconditions

The user has pulled via FTP their order for data from the GSFC ECS DAAC.

3.14.2 Standard Procedures (Login) Scenario

3.14.2.1 Scenario Description

This scenario describes the steps that are followed when a user wishes to know the login procedures for the ECS search and order system. The user phones the User Services at an ECS DAAC and asks for the login procedures. The User Services rep conveys the URL and login procedures over the phone or E-mails complete instructions to the user. The user then retrieves and displays the document containing the login procedures from the ECS Document data server via a WWW viewer on his desktop.

3.14.2.2 Frequency

This type of inquiry is expected to be the most common. User Services will receive several getting-started inquiries per day.

3.14.2.3 Assumptions

1. The user is familiar with the WWW viewer on his desktop screens and knows how to access the User Services office at the DAAC.
2. There is connectivity to the ECS Document data server.
3. Inquiries received by E-mail or other means will be responded to with a pre-made login instruction letter.

3.14.2.4 Components

WWW Viewer on the Client Desktop, ECS Document data server. Figure 3.14.2.4-1 presents a graphical depiction of these components and the players in this scenario.

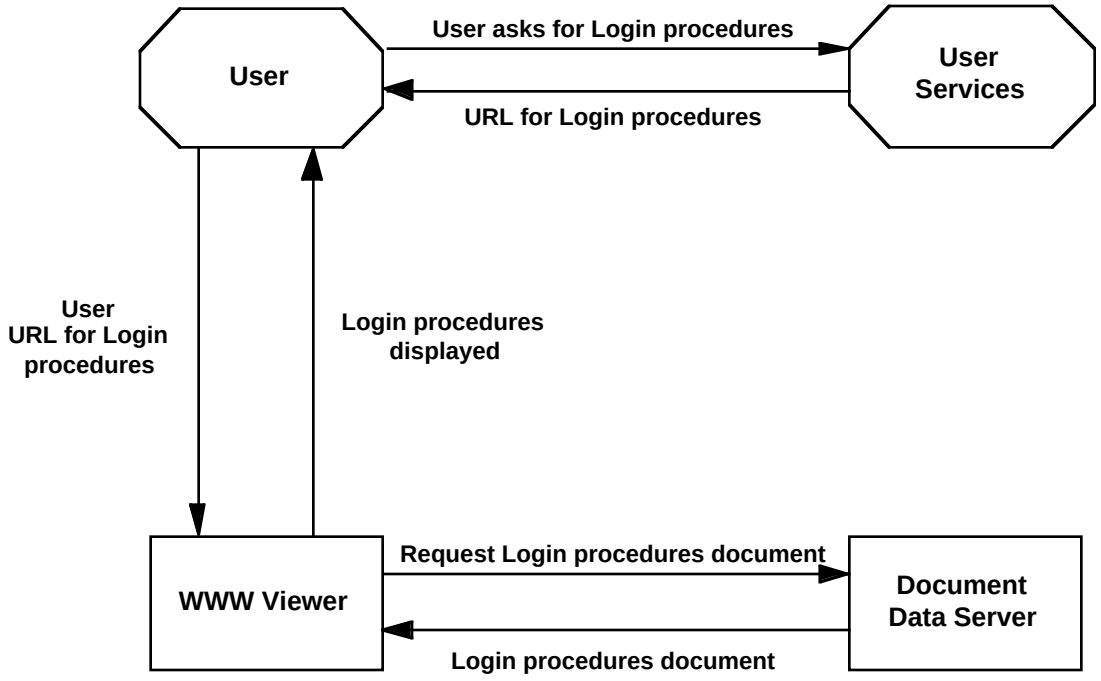

Figure 3.14.2.4-1. Standard Procedures (Login) Scenario Components

3.14.2.5 Preconditions

The user wishes to know the procedures for logging into the ECS system.

3.14.2.6 Detailed Steps of Process

Table 3.14.2.6-1 represents the details of this scenario. The times and duration given are approximate.

Table 3.14.2.6-1. Standard Procedures (Login) Process (1 of 1)

Step	Time (Mins)	User	User Services	ECS System	Figure
1	< 1	User calls the User Services. Rep asking for login procedures.	The USO rep gives the URL for login help procedures. If the user does not have WWW access, plain text version of login procedures are given along with instructions for obtaining a text-based web browser.		
2	<1	The user starts up their WWW viewer and Selects/Opens URL as provided by DAAC User Services.			
	<1			ECS Document data server gets a request for login procedures document and returns a HTML document outlining user login procedures.	
4	<1	The user login procedures displayed on the user screen.			
5	<1	User connects to Search and Order Tool			

3.14.2.7 Postconditions

The login procedures document displayed on the user's screen.

User connects to Search and Order Tool

3.14.3 System Status Scenario

3.14.3.1 Scenario Description

This scenario takes place at the GSFC ECS DAAC during a given day of the Release A time period. The ECS science data server at the GSFC ECS DAAC has gone down. A user running the Release A Search and Order tool creates and submits a query for data archived at the GSFC ECS DAAC. The Release A Search and Order tool displays a status of "CONNECTION FAILED" on the Comm Status screen. The user phones the GSFC ECS DAAC User Services to ask for more details. The GSFC ECS DAAC User Services rep takes the call and runs the Network Node Manager(NNM) workbench tool to determine the status of the GSFC ECS

DAAC. The NNM workbench tool indicates to the User Services rep that the ECS science data server has gone down, but will be back up soon. The User Services rep also views the trouble ticket associated with the science data server failure to determine the down time. The User Services rep then conveys the status and down time information of the ECS science data server to the user. If the data server is expected to be down for an extended period, the User Services rep will collect the order information by phone and submit the actual order on behalf of the user.

3.14.3.2 Frequency

This scenario runs anytime a user phones User Services at a DAAC regarding the status of the system.

3.14.3.3 Assumptions

The user is familiar with the Release A Search and Order tool screens and knows how to access the User Services at the DAAC.

3.14.3.4 Components

Release A Search and Order tool, HP Open View Network Node Manager workbench tool. Figure 3.14.3.4-1 presents a graphical depiction of these components and the players in this scenario.

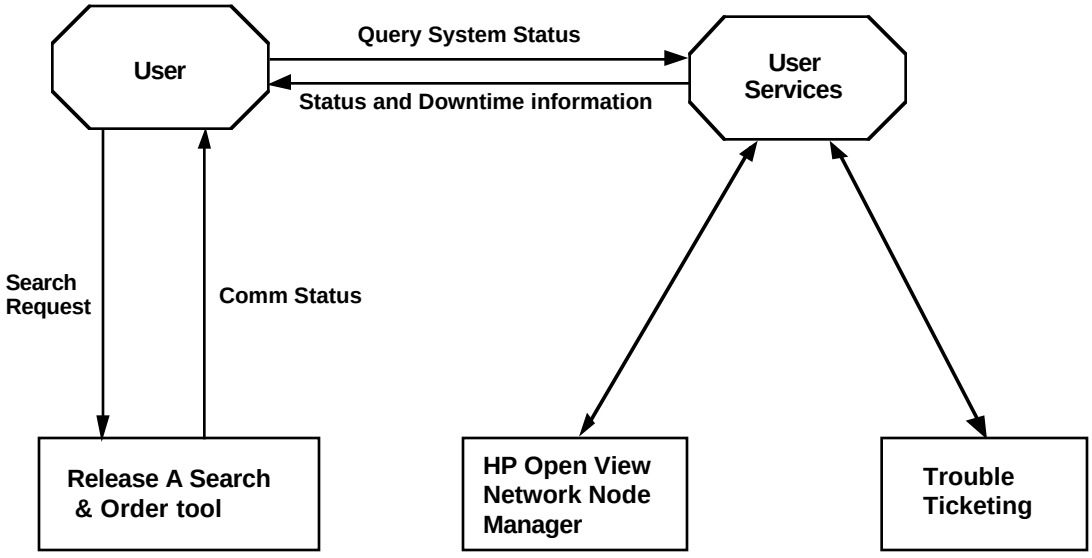

Figure 3.14.3.4-1. System Status Scenario Components

3.14.3.5 Preconditions

The GSFC DAAC ECS science data server has shut down.

3.14.3.6 Detailed Steps of Process

Table 3.14.3.6-1 represents the details of this scenario. The times and duration given are approximate.

Table 3.14.3.6-1. System Status Scenario Process (1 of 2)

Step	Time (Mins)	User	User Services	ECS System	Figure
1	<2	The user creates and submits a query for data archived at the GSFC ECS DAAC			
2	<1			Release A Search and Order tool indicates "CONNECTION FAILED" “View comments” screen gives instructions for obtaining USO contact info for GSFC.	3.14.3.6-1
3	<2	User phones the GSFC ECS DAAC User Services to ask for details.	User Services rep clicks on HP Open View Network Node Manager icon on the workbench.	Network Node Manager application starts up and shows the NNM prototype screen 1.	3.14.3.6-2
4	<1		User Services rep "opens" icon for GSFC ECS DAAC.	The NNM prototype screen 2 displays the icons for the GSFC ECS DAAC science data server.	3.14.3.6-3
5	<1		User Services rep "opens" icon for the GSFC ECS DAAC science data server.	The NNM prototype screen 3 indicates that the GSFC ECS DAAC science data server is re-starting by displaying the icon as red. Other colors indicate different status codes.	3.14.3.6-4

Step	Time (Mins)	User	User Services	ECS System	Figure
6	<1		User Services rep views the Trouble Ticket for GSFC ECS DAAC science data server failure. If no trouble ticket has been submitted, User Services rep submits trouble ticket. The trouble ticket gives the down time information. In the event that the trouble ticket has not been assessed yet (by Ops Supervisor), the USO rep will continue to monitor the status and notify the user of system availability. Also see Fault Management Activities scenario in Section 3.3.1 (Production Failure Scenario)		
7	<1		User Services rep tells the user that the ECS science data server is restarting and also the down time information.		
8	<1		If trouble ticket was submitted by USO rep, rep will receive e-mail notification when resolved. USO rep will then notify user of system availability.		
9	<1		If down time is expected to be prolonged, USO rep will offer to accept the data order by phone and submit it when the system is back up.		

3.14.3.7 Postconditions

On completion of this scenario, the user has the status and downtime information about GSFC DAAC. User will be contacted by USO rep if downtime is prolonged.

Figure 3.14.3.6-1. Release A Search and Order Tool "Comm Status" Screen

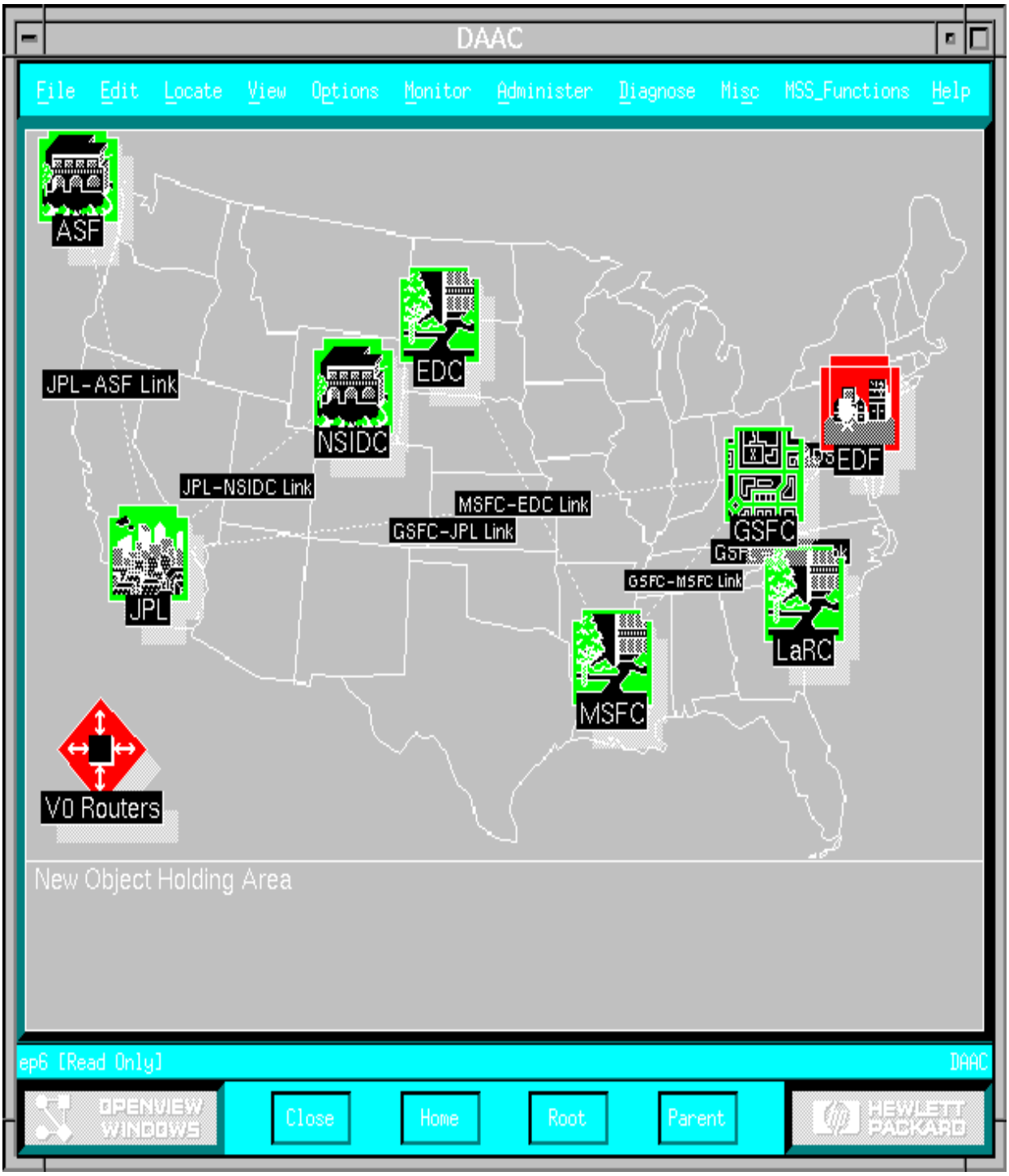

Figure 3.14.3.6-2. NNM Prototype Screen 1

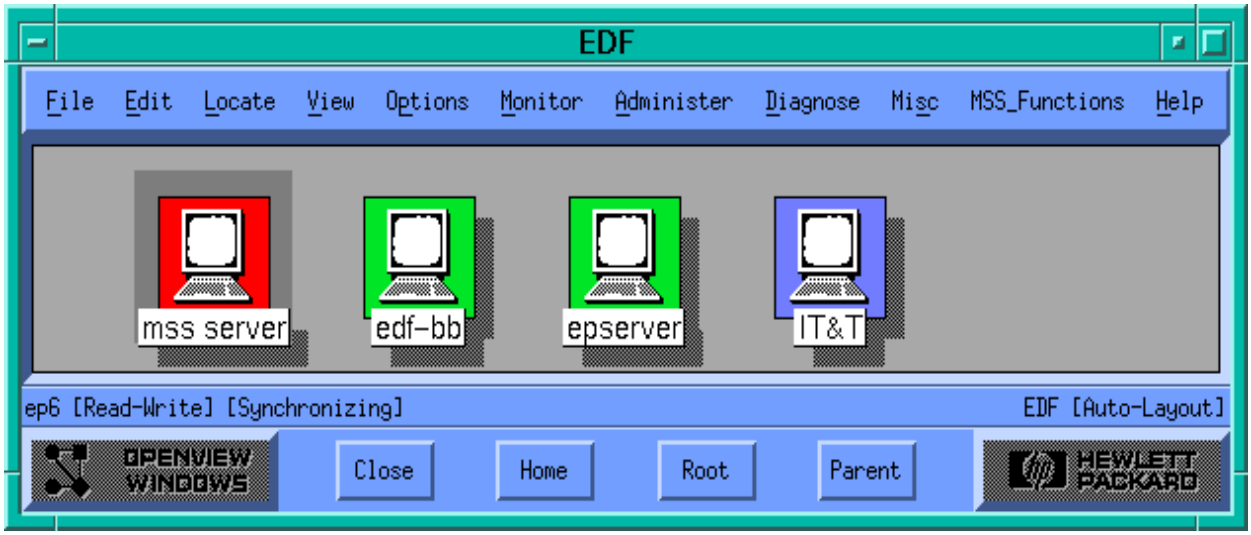

Figure 3.14.3.6-3. NNM Prototype Screen 2

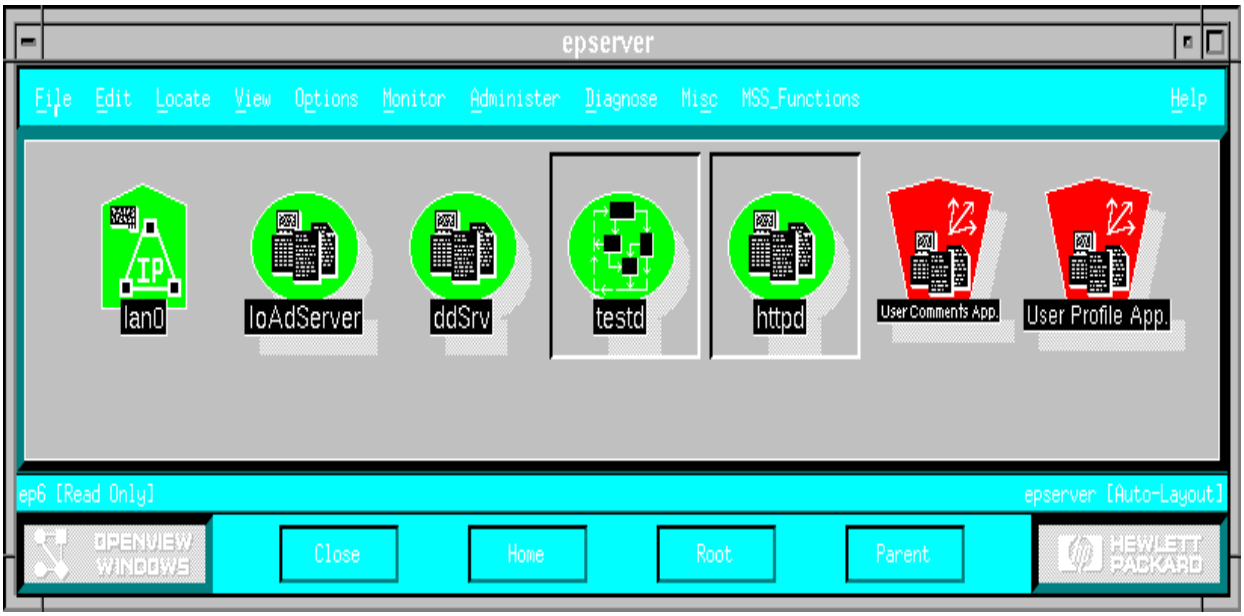

Figure 3.14.3.6-4. NNM Prototype Screen 3

3.14.4 Place an Order for a Potential User Scenario

3.14.4.1 Scenario Description

This scenario is describes the steps taken when a user places an order for data with the user services over a phone. The process starts when a user phones the User Services rep to request data. The User Services rep enters the user's query parameters into the Release A Search and Order tool. The tool quires all appropriate sites. When the query results are received, the rep. asks the user for the delivery information. User services rep then places the order for the data using the Release A Search and Order tool.

3.14.4.2 Frequency

In the Release A timeframe, 3-5 orders per day will placed over the phone.

3.14.4.3 Assumptions

1. The data ordered is assumed to be from non-restricted collections.
2. There is sufficient information from the user to place an order for specific data.
3. The user prefers not to use the Search and Order Tool.

3.14.4.4 Components

Release A Search and Order tool, Data Server. Figure 3.14.4.4-1 presents a graphical depiction of these components and the players in this scenario.

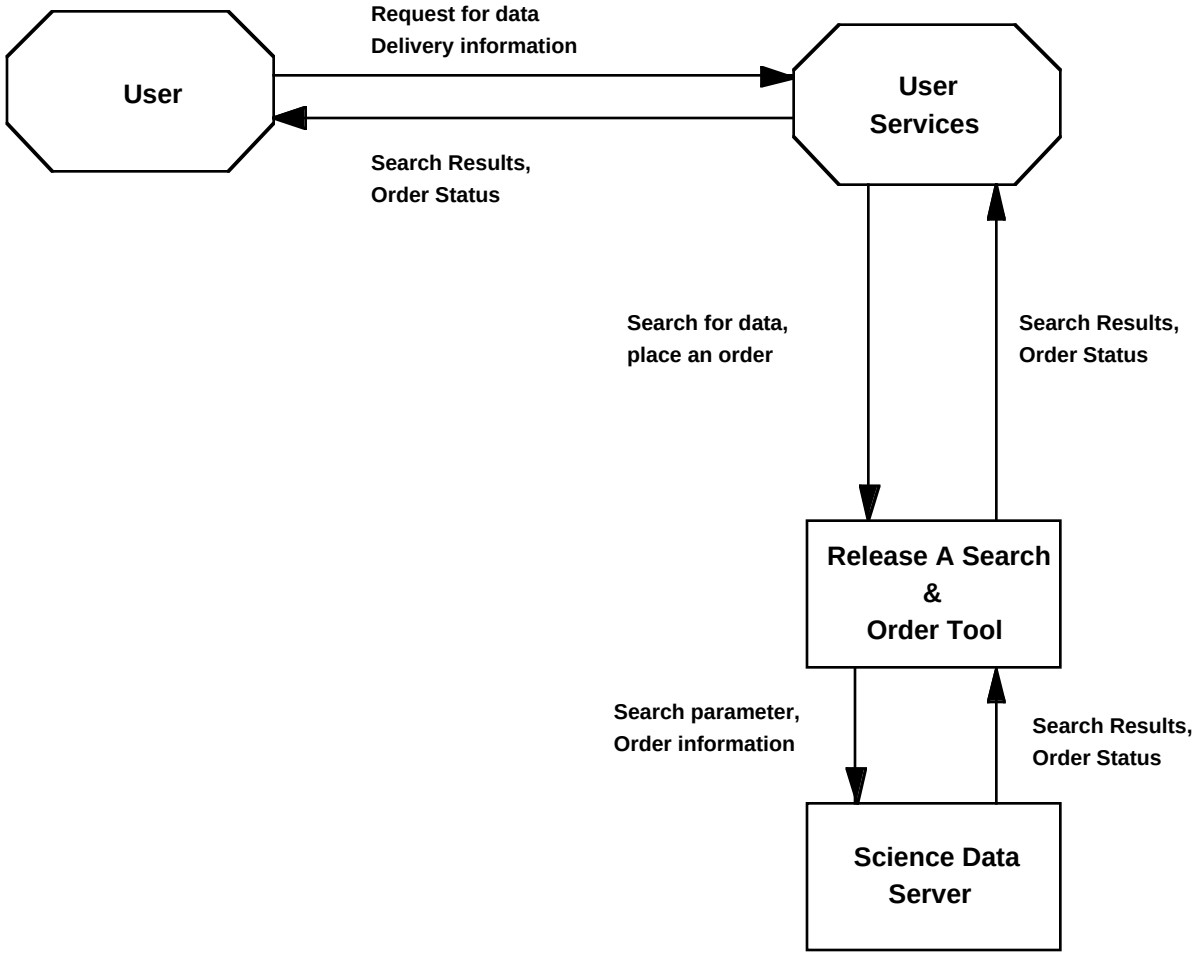

Figure 3.14.4.4-1. Place an Order for a Potential User Scenario Components

3.14.4.5 Preconditions

The system is in steady state.

3.14.4.6 Detailed Steps of Process

Table 3.14.4.6-1 represents the details of this scenario. The times and duration given are approximate.

Table 3.14.4.6-1. Place an Order for a Potential User Scenario Process (1 of 1)

Step	Time (Mins)	User	User Services	Ecs System	Figure
1	< 1	User calls the User Services rep to request data based on query parameters to be delivered.	User Services rep starts release A Search and Order tool.	The Search and Order application starts up.	
2	<1	User communicates data of interest.	User services rep determines degree of detail needed from user.		
3	<5		Based on complexity of the request (spatial/temporal characteristics, parameters, etc.), USO rep may collect the needed information offline. Request ID will be sent to user upon entry in the system.		
4	<5		If request is complicated, User Services rep enters user's query parameters.	The Search and Order tool queries all appropriate sites.	
5	<5		User Services rep receives query results. Rep asks the user for delivery information.		
6	<1	User conveys shipping instructions.	User Services rep places the order for the user.		

3.14.4.7 Postconditions

Order is placed, and user will be notified when completed.

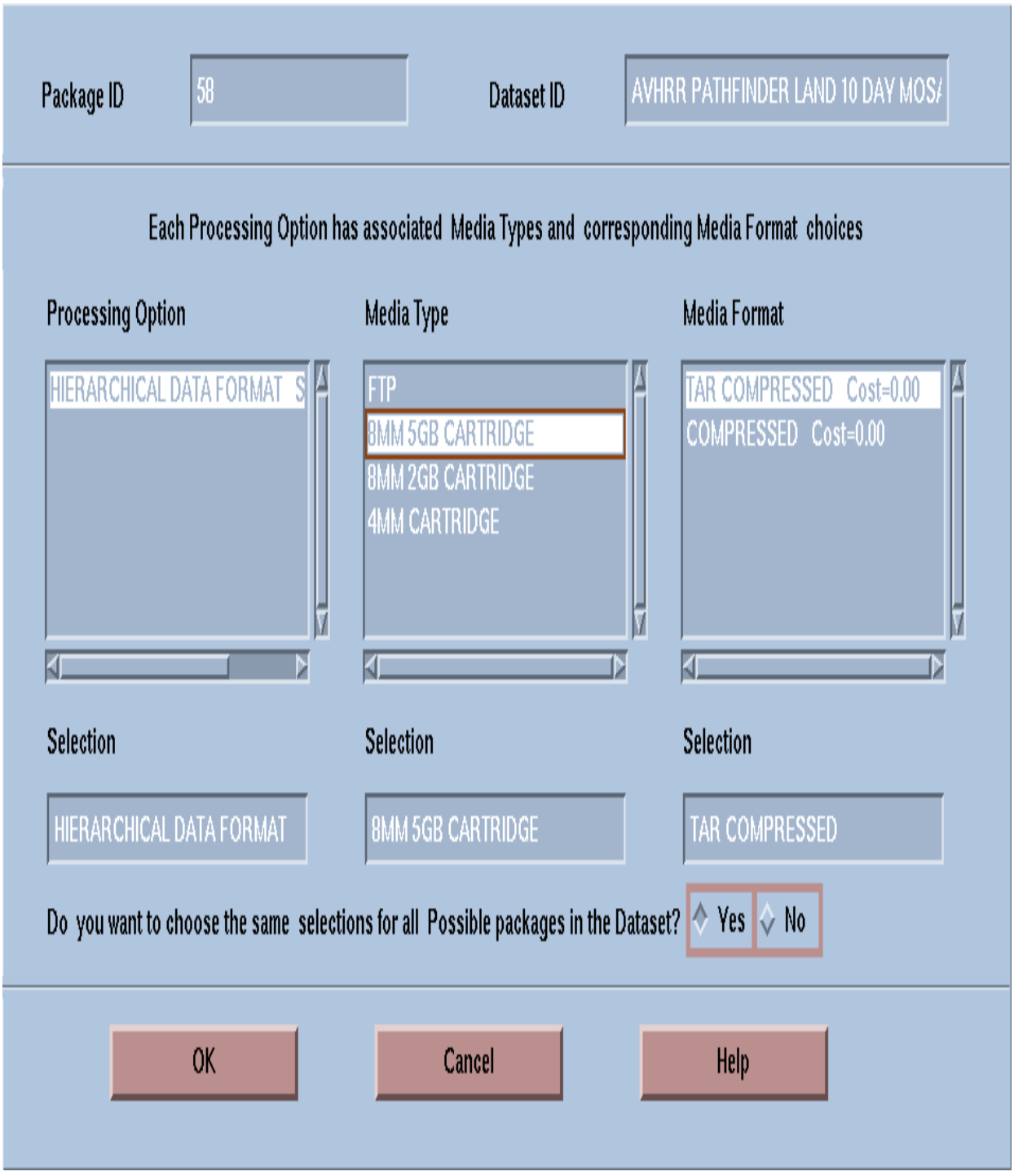

Figure 3.14.4.6-1. Release A Search and Order Tool Screen

3.14.5 Non Conformance Report (Software problem) Scenario

3.14.5.1 Scenario Description

This scenario describes the process of recording and reporting of a software problem. The user calls the DAAC User Services rep to report a software defect. The User Services rep enters the defect details into the system and confirms the items with the user. The User Services rep then submits the problem report.

3.14.5.2 Frequency

User's are more likely to call into User Services instead of opening a trouble ticket on his desktop.

Frequency will be 2 to 4 problem reports per day.

3.14.5.3 Assumptions

1. Software problem is specific to the ECS client, not local DAAC servers.
2. This scenario covers software problem reports only. A general user inquiry tracking scenario is pending.

3.14.5.4 Components

Trouble Ticketing tool. Figure 3.14.5.4-1 presents a graphical depiction of this components and the players in this scenario.

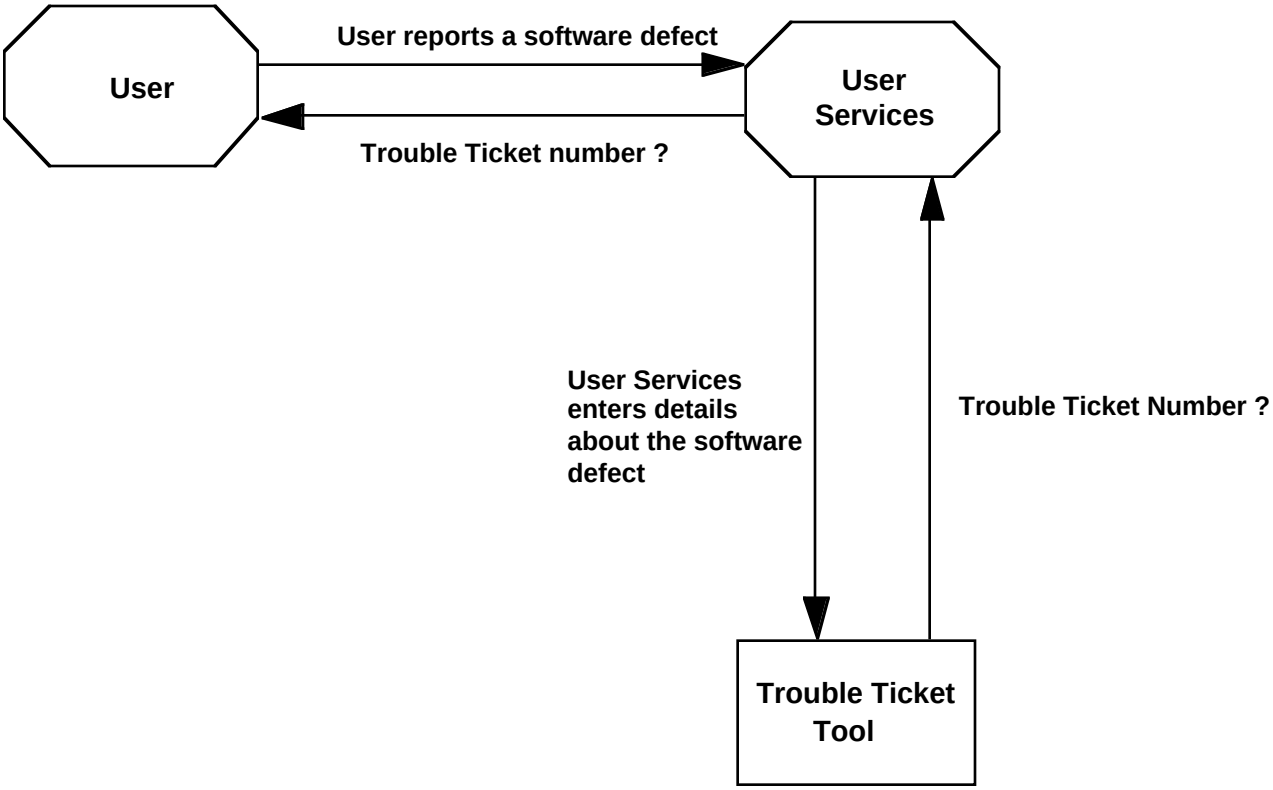

Figure 3.14.5.4-1. Non Conformance Report (Software problem) Scenario Components

3.14.5.5 Preconditions

User encounters a software problem and wishes to report it in person.

The inquiry is an actual software defect, not a system usage or navigation problem.

3.14.5.6 Detailed Steps of Process

Table 3.14.5.6-1 represents the details of this scenario. The times and duration given are approximate.

Table 3.14.5.6-1. Non Conformance Report (Software problem) Scenario Process (1 of 1)

Step	Time (Mins)	User	User Services	Ecs System	Screen
1	<1	User calls the User Services to report a software defect.	The User Services rep takes the call (or E-mail) and clicks on the Trouble Ticketing tool icon on his desktop.	Trouble Ticketing application starts up.	
2	<1		Rep fills in items in Trouble Ticket (e.g., application, platform, version, description, user information and E-mail address etc.) based on User's inputs.		
3	<1		Rep confirms items with user, and submits ticket. For E-mail correspondence, a message is sent to the user with this information.	Application submits the ticket to Remedy.	
4	<1		DAAC User Services regularly monitors trouble ticket status and notifies user when problem is resolved.	Application notifies user when resolution is implemented.	

The software defect is in the system.

There is a regular evaluation of reported problems to identify

patterns of problems and devise resolutions.

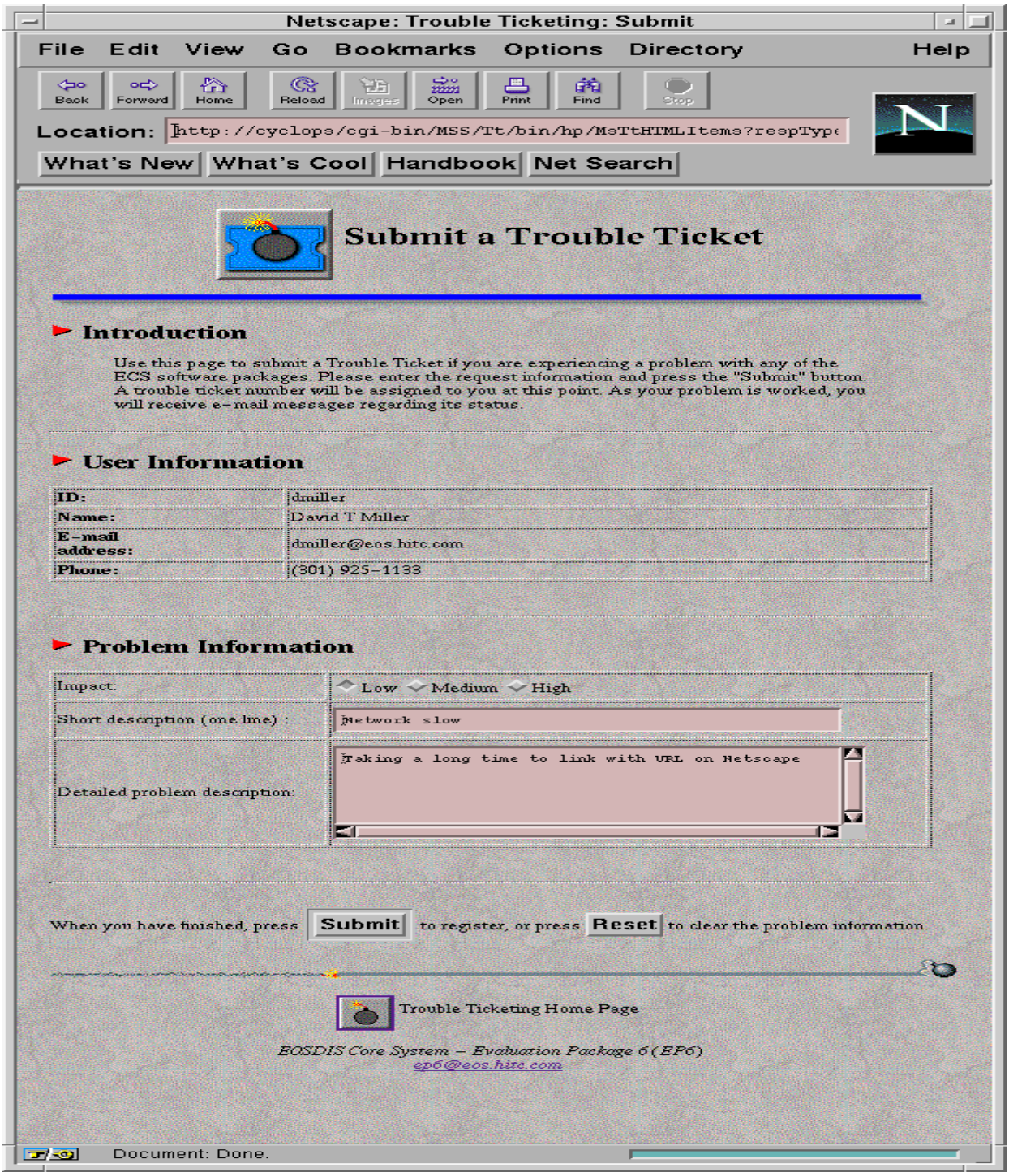

Figure 3.14.5.6-1. Trouble Ticket Submit Page

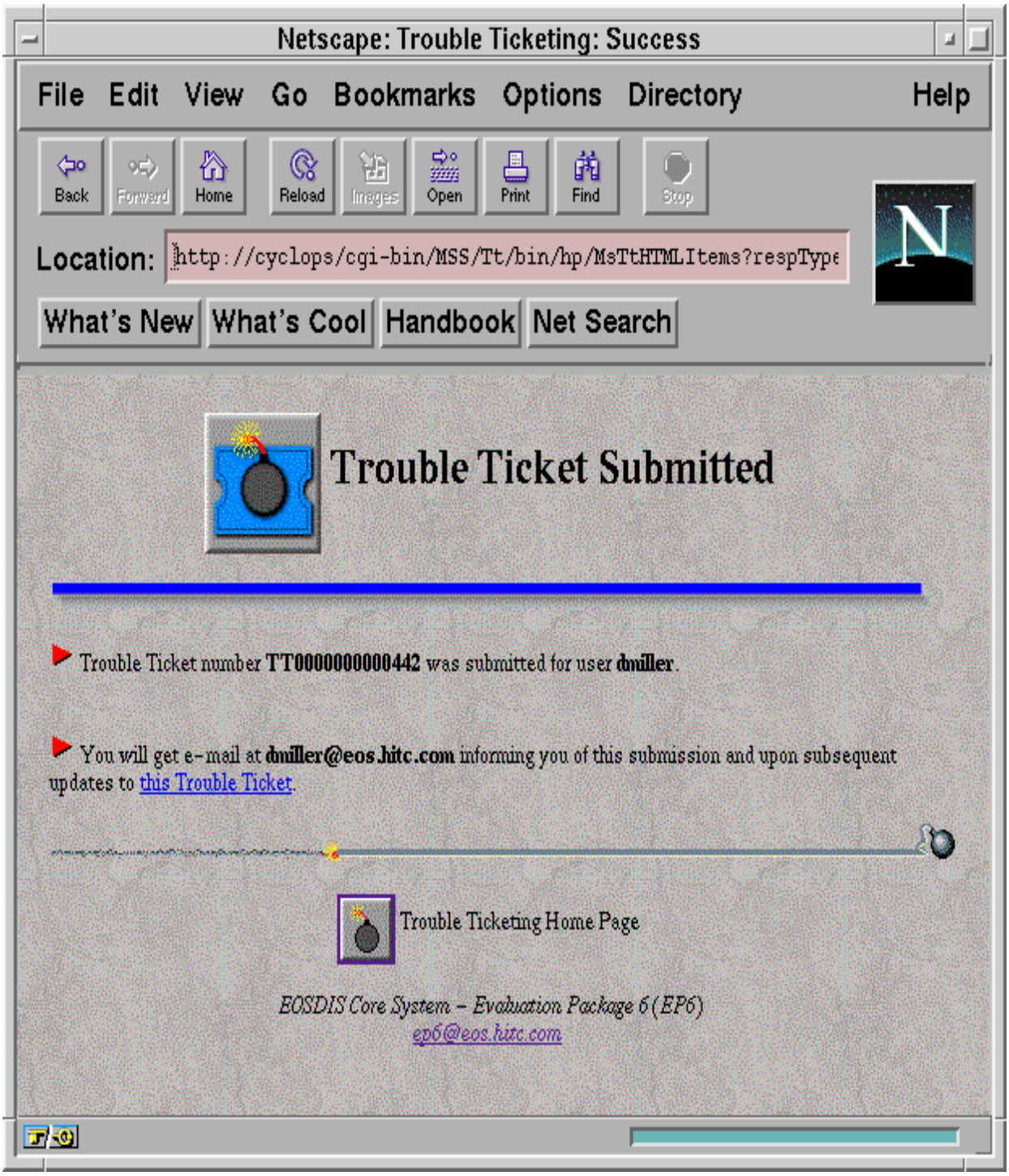

Figure 3.14.5.6-2. Trouble Ticket Confirmation Page

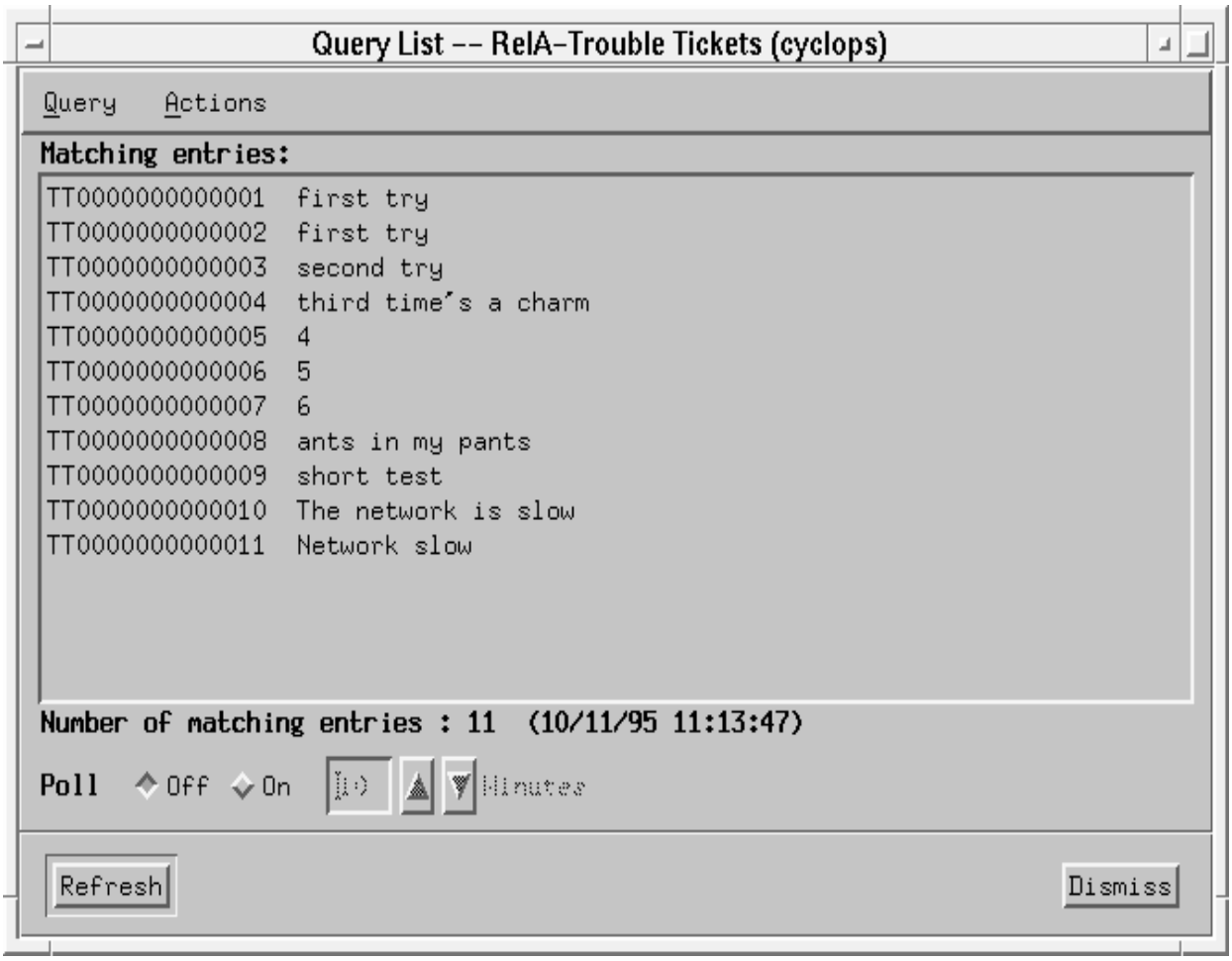

Figure 3.14.5.6-3. Trouble Ticket List

3.14.6 Lost User Password Scenario

3.14.6.1 Scenario Description

This scenario is describes the process involved in restoration of a user's password. A user telephones a DAAC user services office to inform the user services rep that he has forgotten his password. The user services rep looks up the user's profile and verifies his identity. Upon verification, the rep changes the user's password to temporary and conveys the temporary password to the user in an appropriate manner.

3.14.6.2 Frequency

DAAC USO's will receive at most one or two requests for password restoration per day.

3.14.6.3 Assumptions

1. User really does have an existing password.
2. There is no expiration date for user passwords.
3. Password inquiry is received by phone only.

3.14.6.4 Components

The User Profile tool (MSS). Figure 3.14.6.4-1 presents a graphical depiction of this components and the players in this scenario.

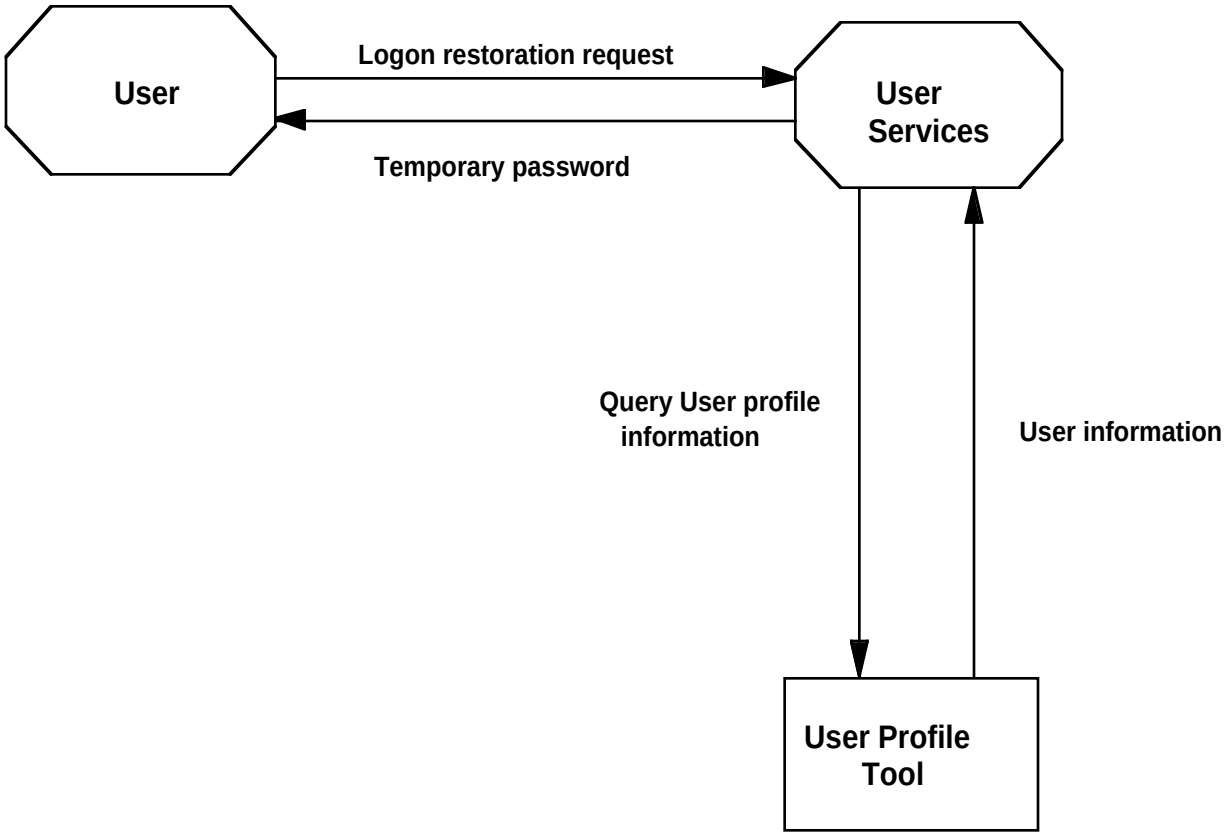

Figure 3.14.6.4-1. Lost User Password Scenario Components

3.14.6.5 Preconditions

The user has forgotten the password required to log into the ECS system.

Inquiries received by other means will require phone follow-up to avoid electronic transmission of passwords.

3.14.6.6 Detailed Steps of Process

Table 3.14.6.6-1 represents the details of this scenario. The times and duration given are approximate.

Table 3.14.6.6-1. Lost User Password Scenario Process (1 of 1)

Step	Time (Mins)	User	User Services	Ecs System	Screen
1	<1	User calls the user services rep because he has forgotten his password.	User services rep clicks on the User Profile icon on the desktop.	User Profile application starts up.	
2	<1		User services rep enters User's Name to display user's current profile.	Application queries MSS for user profile information.	
3	<1			User 's profile information is displayed (including password).	
4	<1		User services rep performs appropriate (Policy Driven) verification procedures to verify the User's Identity via the user profile information.		
5	<1		Upon verification, user services rep changes the user's password to temporary.	Application submits updated profile information (password) to MSS.	
6	<1		User services rep conveys temporary password to User in an appropriate (Policy Driven) manner.		
7	<1	User logs into Search and Order Tool to resume order placing, and changes temporary password to a permanent one.			

3.14.6.7 Postconditions

The user has a temporary password, and can change it by themself in the Search and Order Tool.

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